

LISTING OF CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

Claims 1-67. (Cancelled)

68. (New) An optical arrangement for a stepped lens spotlight, comprising: a stepped lens with a diffusing screen, the diffusing screen being arranged in a first region and the stepped lens is arranged in a second region,

wherein an aperture angle of the light emerging from the optical arrangement is settable between a smaller aperture angle and a larger aperture angle based upon a change in the shape of the light impinging on the optical arrangement and/or a change in the size of the light illuminating the optical arrangement, and wherein the first and second regions in each case occupy concentrically arranged surfaces having different diameters.

69. (New) The optical arrangement as claimed in claim 68, wherein the aperture angle is settable based on a change in the diameter of the light impinging on the optical arrangement without altering the angle of incidence of the light illuminating the optical arrangement.

70. (New) The optical arrangement as claimed in claim 68, further comprising a ratio of surface size of the stepped lens to surface size of the diffusing screen of greater than 2 to 1.

71. (New) The optical arrangement as claimed in claim 70, wherein the ratio is greater than 10 to 1.

72. (New) The optical arrangement as claimed in claim 70, wherein the ratio is greater than 100 to 1.

73. (New) The optical arrangement as claimed in claim 68, wherein the aperture angle of the light emerging from the diffusing screen in a vertical direction is different from the aperture angle in a horizontal direction.

74. (New) The optical arrangement as claimed in claim 68, wherein the diffusing screen comprises a plurality of annular surface regions, which scatter light in each case in different directions or to different extents.

75. (New) The optical arrangement as claimed in claim 68, wherein, for a stepped lens spotlight having an elliptic reflector having an ellipticity ε , the ratio of the focal length to the radius $n_{St1} = R_{St1}/F_{St1}$ of the stepped lens is greater than 0.5 times $1/\sqrt{\varepsilon^2-1}$.

76. (New) The optical arrangement as claimed in claim 75, wherein the ratio is greater than 0.7 times $1/\sqrt{\varepsilon^2-1}$.

77. (New) The optical arrangement as claimed in claim 75, wherein the ratio is greater than 0.9 times $1/\sqrt{\varepsilon^2-1}$.

78. (New) The optical arrangement as claimed in claim 68, wherein the diffusing screen is arranged only in a central and/or centric region of the stepped lens.

79. (New) The optical arrangement as claimed in claim 68, wherein the diffusing screen is arranged at a light exit area and/or a light entry area.

80. (New) The optical arrangement as claimed in claim 68, wherein the light-diffusing element has a region that diffuses to a greater extent centrically and a region that diffuses to a lesser extent marginally.

81. (New) The optical arrangement as claimed in claim 68, wherein the material of the stepped lens and/or of the diffusing screen comprises a material selected from the group consisting of glass, glass-ceramic material, plastic, and a hybrid composite made of glass and plastic.

82. (New) The optical arrangement as claimed in claim 82, wherein the stepped lens is an aspherical lens or a spherical lens.

83. (New) The optical arrangement as claimed in claim 68, wherein the stepped lens has a basic body with an essentially planar surface.

84. (New) The optical arrangement as claimed in claim 68, wherein the stepped lens has an optically beam-shapingly effective basic body with a surface having shape selected from the group consisting of an essentially concave spherical shape, an essentially concave aspherical shape, an essentially convex spherical shape, and an essentially convex aspherical shape.

85. (New) The optical arrangement as claimed in claim 68, wherein the concentrically arranged surfaces have a circle-arc segment shape or a cone envelope shape.

86. (New) The optical arrangement as claimed in claim 68, wherein the concentrically arranged surfaces are shaped such that an approximately planar wave with phase fronts perpendicular to the optical axis is combined at a real focal point or is converted into a spherical wave whose midpoint appears to lie at a virtual focal point.

87. (New) The optical arrangement as claimed in claim 68, wherein the stepped lens comprises a material with a first dispersion behavior and a further lens with an opposite refractive power and with a material with a second dispersion behavior so that chromatic aberrations are reduced.

88. (New) The optical arrangement as claimed in claim 68, wherein the stepped lens is an embossed plastic lens with an optical path length difference at the respective step of less than about 1000 optical wavelengths.

89. (New) The optical arrangement as claimed in claim 68, wherein the stepped lens is formed or arranged on a first side and the diffusing screen is formed or arranged on a side opposite to the first side.

90. (New) The optical arrangement as claimed in claim 68, wherein the concentrically arranged surfaces essentially have the same radial extent.

91. (New) The optical arrangement as claimed in claim 68, wherein the concentrically arranged surfaces comprises at least two adjacent annular segments having stepped elevations essentially having the same height.

92. (New) The optical arrangement as claimed in claim 68, wherein at least that surface of the optical arrangement which faces the light source comprises thermally prestressed glass.

93. (New) The optical arrangement as claimed in claim 68, wherein the stepped lens and/or the diffusing screen are/is formed as a filter selected from the group consisting of a UV filter, an IR filter, a colored bandpass filter, a conversion filter, and any combinations thereof.

94. (New) The optical arrangement as claimed in claim 68, wherein the stepped lens and/or the diffusing screen are coated with a mechanical antiscratch layer and/or an antireflection layer.

95. (New) The optical arrangement as claimed in claim 68, wherein the stepped lens is a planoconvex converging lens or a biconcave negative lens.

96. (New) The optical arrangement as claimed in claim 68, wherein the stepped lens has a negative focal length.

97. (New) The optical arrangement as claimed in claim 68, further comprising an ellipsoidal reflector.

98. (New) The optical arrangement as claimed in claim 97, wherein the stepped lens has a virtual focal point that can be superimposed with a focal point of the reflector that is remote from the ellipsoidal reflector in a spot position of the stepped lens.

99. (New) The optical arrangement as claimed in claim 97, wherein the ellipsoidal reflector comprises a metallic or transparent dielectric glass and/or plastic.

100. (New) The optical arrangement as claimed in claim 97, further comprising an auxiliary reflector arranged between the stepped lens and the ellipsoidal reflector.

101. (New) The optical arrangement as claimed in claim 68, wherein the diffusing screen has a first surface that is subdivided into facets, each facet being assigned an elevation or depression with a second surface formed in curved fashion, wherein the facets assume different geometrical shapes.

102. (New) The optical arrangement as claimed in claim 101, wherein the facets have a polygonal edge contour.

103. (New) The optical arrangement as claimed in claim 101, wherein the facets contain different areas.

104. (New) The optical arrangement as claimed in claim 101, wherein the facets assume a shape selected from the group consisting of a triangle, quadrangle, pentagon, hexagon, heptagon, and any combinations thereof.

105. (New) The optical arrangement as claimed in claim 101, wherein the facets have different orientations.

106. (New) The optical arrangement as claimed in claim 101, wherein the elevations or depressions are formed in the shape of spherical caps.

107. (New) The optical arrangement as claimed in claim 101, wherein the height of the elevations and/or the depth of the depressions are different.

108. (New) The optical arrangement as claimed in claim 101, wherein the respective vertices of the elevations or depressions are arranged along a spiral.

109. (New) The optical arrangement as claimed in claim 108, wherein the vertices are arranged on an Archimedes' spiral.

110. (New) The optical arrangement as claimed in claim 108, wherein the arc length between two adjacent vertices along the spiral is almost equidistant.

111. (New) The optical arrangement as claimed in claim 108, wherein the wherein the arc length between two adjacent vertices along the spiral are variable.

112. (New) The optical arrangement as claimed in claim 101, wherein the facets that are rotated relative to one another.

113. (New) The optical arrangement as claimed in claim 101, wherein the facets are offset from their regular position by means of a Monte Carlo method.

114. (New) The optical arrangement as claimed in claim 101, wherein the diffusing screen has a defined granularity that becomes finer in a central region and coarser with increasing distance from the center.